Clin Pediatr 2018, Volume 3
DOI: 10.4172/2572-0775-C3-015

24th European Pediatrics Conference

September 10-11, 2018 | Copenhagen, Denmark

Lead drinking water pollution and feeding infants

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Background & Aim: Lead enters drinking water by leaching from pipes and solder joints in household plumbing. Human activities can substantially increase lead release and dissemination into the environment. Aim of the study is to evaluate the effects of lead drinking water pollution on blood lead levels (BLLs) of infants fed either milk or artificial formula.

Materials & Methods: This study was done on 90 drinking tap water samples and 90 blood samples taken from infants. All these samples were subjected for lead analysis by graphite furnace atomic absorption spectrophotometer.

Results: Mean lead level in drinking groundwater showed higher level than in drinking surface water. An elevation of blood lead level of bottle feeders using groundwater was noticed higher compared with that of their counterparts using surface water. In addition, an elevation of blood lead level of breast feeders where mothers drink groundwater was noticed higher when compared with that of their counterparts born to mothers drinking surface water. There was a positive relationship between blood lead levels and drinking water lead levels.

Conclusions: We concluded that bottle-feeding was a strong predictor of elevated blood lead levels among infants.

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